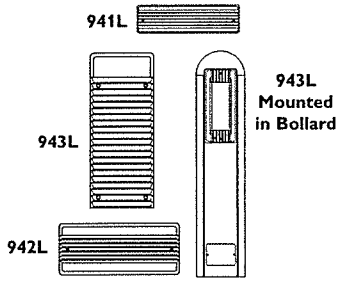
Job:
Type:
Notes:

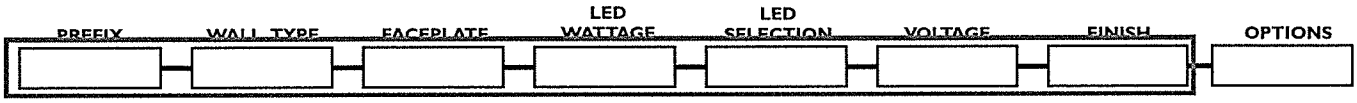
UVM - NORTH FRESHMAN HOUSING
TYPE: WL

94 Line LED

941L, 942L and 943L Step and Aisle Lights

The Philips Gardco 941L, 942L and 943L recessed aisle lights are architecturally styled luminaires precisely constructed of die cast aluminum, providing light with high performance, long life LED systems. Retrofit kits are also available, making it possible to update installations of classic 941, 942 and 943 Philips Gardco fluorescent and HID step lights to LED without the need to replace the back housing. A field adjustable junction box enhances design flexibility. Self-compensating silicone gasketing completely excludes moisture, insects and contaminants. A choice of three (3) architecturally designed faceplates allows for a variety of applications. The ribbed guard faceplate offers vandal protection for glass lenses.





Enter the order code into the appropriate box above. Omit WALL TYPE for 943L-B25 and 943L-B40. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX

	Complete Luminaires
941L[1]	Horizontal
942L	Horizontal
943L	Vertical
943L-B25	943L Mounted in 25" Bollard
943L-B40	943L Mounted in 40" Bollard
	Retrofit Kits[1]
RK-941L[1,2]	Horizontal
RK-942L[2]	Horizontal
RK-943L[2]	Vertical

WALL TYPE

D Drywall
Not suitable for concrete pour applications. Also, if insulating material is present, it must be kept at least 3" away from luminaire. Type D units are thermally protected. Non-IC luminaire.

C Concrete Pour
Suitable for concrete pour applications only.

NOTE: **WALL TYPE** *does not apply to 943L-B25 and 943L-B40. Omit WALL TYPE for 943L-B25 and 943L-B40.*

FACEPLATES

LV	Louver
DG	Diffuse Glass
RGD[1]	Ribbed Guard with Diffuse Glass

1. 941L and RK-941L are not available with the RGD faceplate.
2. Retrofit kits are available in Wall Type "C" only (Concrete Pour.) Retrofit kits are not available for existing Wall Type "D" (Drywall) luminaires. The step light portion of existing 943BL25 and 943BL40 units may be replaced utilizing RK-943L retrofit kits.

Back housings for concrete pour applications (Type C) are available for pre-shipment. Contact factory for details.

LED WATTAGE with LUMEN DATA

Order Code	Description	LED Current (mA)	Average System Watts[3]	Faceplate Finish	Absolute Initial Luminaire Lumens[4]							
					941		942			943		
					Faceplate		Faceplate			Faceplate		
					LV	DG	LV	DG	RGD	LV	DG	RGD
20LA	20 watt, NW (4,000K), LED integral lens array.	350	20	**BRP**	78	699	153	807	272	152	738	274
				WP	226	937	278	1,145	493	335	1,048	501
31LA	31 watt, NW (4,000K), LED integral lens array.	530	31	**BRP**	111	927	207	1,037	380	209	1,421	372
				WP	319	1,321	377	1,474	670	454	1,001	679
40LA[5]	40 watt, NW (4,000K), LED integral lens array.	700	40	**BRP**	*See Note 5*	*See Note 5*	250	1,382	467	256	1,251	465
				WP	*See Note 5*	*See Note 5*	472	1,960	836	568	1,775	849

3. System input wattage may vary based on input voltage, by up to +/- 10% , and based on manufacturer forward voltage, by up to +/- 8%.
4. Lumen values based on photometric tests performed in compliance with IESNA LM-79. Values are for luminaires with a white and bronze faceplate. Values will vary based on faceplate color chosen. Contact OutdoorLighting.Applications@philips.com for values not shown above.
5. 941L is not available in 40LA (700mA) LED wattage. Lumen values shown are based on Bronze painted faceplates. Values will vary based on the faceplate color.

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941L, 942L and 943L Step and Aisle Lights

LED SELECTION

CW	*5,700°K, 75CRI*
NW	*4,000°K, 70CRI*
WW	*3,000°K, 80CRI*
AM	*Amber*

VOLTAGE

120[6]
277[6]
UNIV[7]

6. Wall Type D luminaires only.
7. UNIV means 120V through 277V input. Not available on Wall Type D luminaires.

FINISH

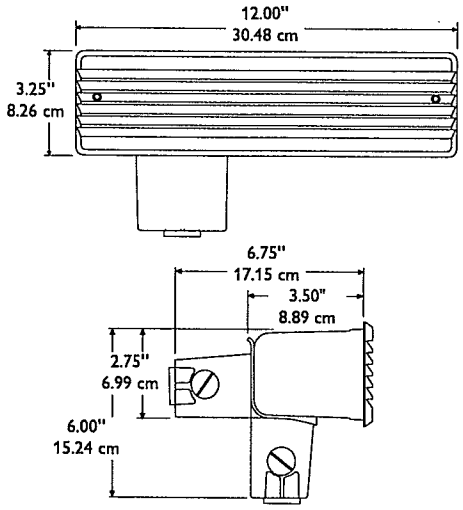
BLP	Black Paint
BRP	Bronze Paint
WP	White Paint
NP	Natural Aluminum Paint
OC	Optional Color Paint *(Specify RAL designation. ex: OC-RAL7024)*
SC	Special Color Paint *(Specify. Must supply color chip)*

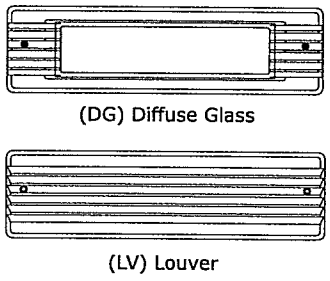
OPTIONS

F	Fusing *(Provide specific input voltage.)*
TP	Tamper Resistant Screws

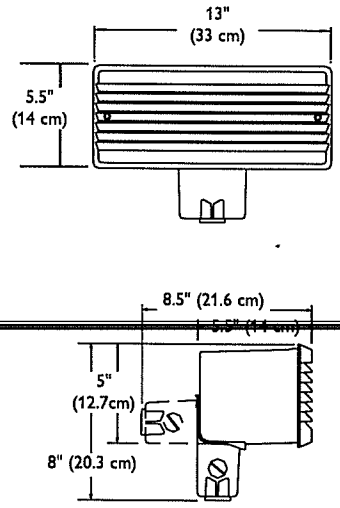
DIMENSIONS

941L Dimensions

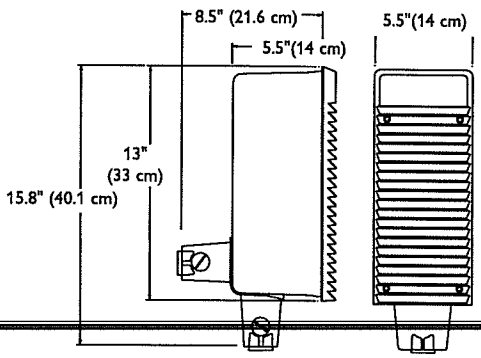


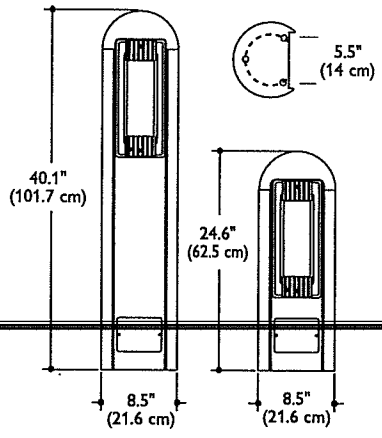


942L Dimensions



943L Dimensions





943L-B40 943L-B25

94 Line LED

941L, 942L and 943L Step and Aisle Lights

SPECIFICATIONS

GENERAL: The Philips Gardco 941L, 942L and 943L recessed aisle lights are architecturally styled luminaires precisely constructed of die cast aluminum, providing light with high performance, long life LED systems. A field adjustable junction box enhances design flexibility. Self-compensating silicone gasketing completely excludes moisture, insects and contaminants. A choice of three (3) architecturally designed faceplates allows for a variety of applications. The ribbed guard faceplate offers vandal protection for glass lenses.

RETROFIT KITS: Retrofit kits are also available, making it possible to update installations of classic 941, 942 and 943 Philips Gardco fluorescent and HID step lights to LED without the need to replace the back housing. Retrofit kits are available in Wall Type "C" only (Concrete Pour.) Retrofit kits are not available for existing Wall Type "D" (Drywall) luminaires. The step light portion of existing 943BL25 and 943BL40 units may be replaced utilizing RK-943L retrofit kits.

FACEPLATE: All faceplates are constructed of one piece die cast aluminum and are secured to the housing with two (2) recessed and captive hex head socket screws. Integral spring clips ensure positive grounding. Self-compensating single-piece silicone gasketing completely seals the luminaire and allows for varying wall thicknesses.

LOUVER: Die cast louvers span the entire length of the faceplate, providing for vandal resistance and glare control. Louver faceplate include diffuse glass behind the louvers to minimize apparent glare from the luminaire.

DIFFUSE GLASS: The faceplate includes a 3/16" thick diffuse white opal flat tempered glass lens. The lens is internally sealed and mounted and provides a soft, uniform glow.

RIBBED GUARD: 90° die cast louvers span the entire length of the faceplate over a diffuse glass lens. Not available in the 941L and RK-941L.

HOUSING: The housing is corrosion-resistant die cast aluminum.

J-BOX: The field convertible junction box is die cast aluminum. It is shipped factory-mounted to the back of housing. The box can be easily positioned on the bottom of the luminaire via two (2) phillips head screws. Each J-box includes three (3) threaded openings (one on each side and one on the bottom) that accommodate 3/4" conduit.

LED RELIABILITY:

PREDICTED LUMEN DEPRECIATION DATA		
Ambient Temperature °C	Driver mA	L_{70} Hours[9]
25 °C	350 mA	180,000
	530 mA	115,000
	700 mA	95,000
40 °C	350 mA	175,000
	530 mA	100,000
	700 mA	90,000

9 Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output.

THERMAL MANAGEMENT: Philips Gardco 94 Line LED step and aisle lights include integral thermal control to provide the excellent thermal management so critical to long LED system life.

ELECTRICAL: Luminaires are equipped with an LED driver that accepts 120V through 277V, 50hz to 60hz, input (Wall Type C) , or with specific 120V or 277V input voltages (Wall Type D). Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F / 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaire consumes 0.0 watts in the off state. Surge protector standard. 10KA per AN SI/IEEE C62.41.2.

FINISH: Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WP), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires feature a 5 year limited warranty covering the LED arrays and LED drivers. See Warranty Information on www.sitelighting.com for complete details and exclusions.

Philips Lighting
North America Corporation
200 Franklin Square Drive
Somerset, NJ 08873
Tel. 855-486-2216

Imported by: Philips Lighting,
A division of Philips Electronics Ltd.
281 Hillmount Rd,
Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

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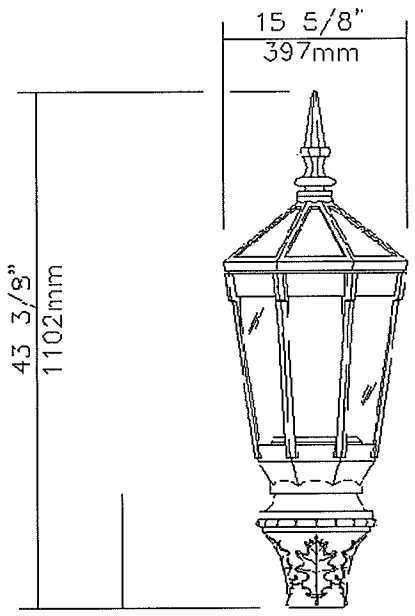

Luminaire **L70-40W30LED4K-PC-FC-LE3/LE5-VOLT-SFO-GN8TX-LMSXXXXXX**

Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Hood: In an octogonal tapered shape, this hood is made of a one-piece cast 356 aluminum mechanically assembled to the luminaire.

Guard: In a octogonal tapered shape, this guard is a one-piece cast 356 aluminum mechanically assembled to the fitter.

Lens: (PC-FC), Made of frosted clear polycarbonate assembled on the guard with brackets.

Lamp: *(Included)*, Composed of 30 high performance white LEDs, 40w lamp wattage. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan, 70 000 hours after which the system emits 70% of its original lumen output, all of those parameters are tested for 100% of light engines. Use of a metal core board insures greater heat transfer and longer lifespan of the light engine

Optical System: (LE3), I.E.S. type III (asymmetrical) / (LE5), I.E.S. type V (symmetrical). Composed of high performance collimators, optimized with varying acrylic beam angles to achieve desired distribution. System is rated IP65. Performance shall be tested per LM63 and LM79 (IESNA) certifying its photometric performance. Street-side indicated.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (passive cooling device)

Driver: High power factor of 99%. Electronic driver, operating range 50-60 Hz. **Auto-adjusting to a voltage between 120 and 277 volt AC, Class II**, THD of 20%. Maximum ambient operating temperature from -40F(40C) to 130F(55C) degrees. Certified in compliance to CUL requirement. Weather tightness rating IP66. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 105F(40.5C) degrees.

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The current supplying the LEDs will be reduced by the driver if the internal temperature exceeds 203F(95C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction.

Surge Protector: LED Driver 3 poles surge Protectors that protect Line-Ground, Line-Neutral, and Neutral-Ground in accordance with IEEE / ANSI C62.41.2 guidelines.

Access-Mechanism: Two-integrated hinges on hood with stopper and a captive screw shall offer access to the inside of the luminaire and to the lamp. An embedded memory-retentive gasket shall ensure weatherproofing.

Fitter: (SFO), Cast 356 aluminum c/w 4 set screws 3/8-16 UNC. Slip-fits on a 4"(102mm) outside diameter x 4" (102mm) long tenon.

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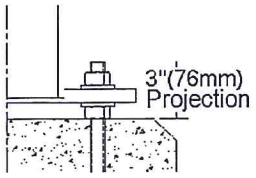
Base & Bolts Information



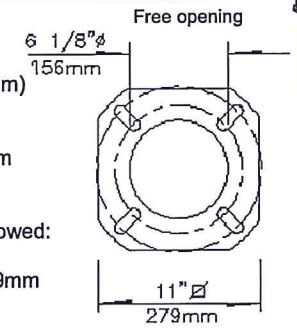
Comes with 4 steel anchor bolts, 3/4" X 17" + 3" Fully Galvanized, 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

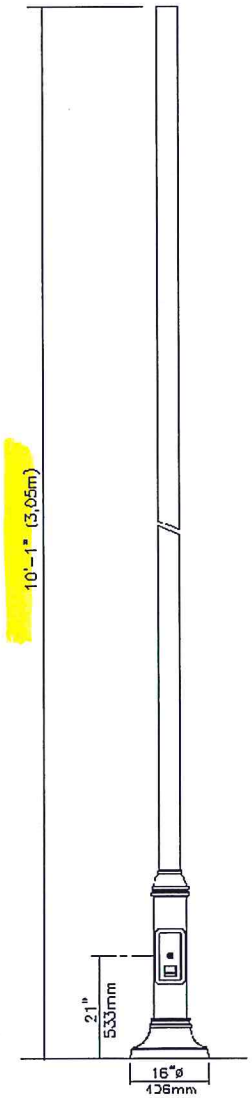
Anchor Plate

-B.C.:
10 1/2" (267mm)

- Material:
Cast Aluminum

- NOTE:
Bolt Circle Allowed:
9" to 11"
229mm to 279mm





Pole **AM6F-10.08-PW-VPA-GN8TX-LMSXXXXXX**

Description of Components:

Pole Shaft: Shall be made from a 4" (102mm) round extruded 6061-T6 aluminum tubing, having a 0.125" (3.2mm) wall thickness, welded to the pole base, **c/w a wire retainer inside top of pole.**

Joint Cover: Two-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Base: Shall be made from a 6 5/8" (168mm) round extruded 6061-T6 aluminum tubing base having a 0.135" (3.4mm) wall thickness, welded to both the bottom and top of the anchor plate.

Maintenance Opening: The pole shall have a 4 1/2" x 10" (114mm x 254mm) maintenance opening centered 21" (533mm) from the bottom of the anchor plate, complete with a weatherproof embossed aluminum cover and a copper ground lug.

Base Cover: Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Pole Options: (PW) Pole is prewired (please refer to Wiring note).
(VPA) Vandalproof screw(s), Allen type vandalproof screw(s), with pin in socket tamper resistant head.

IMPORTANT: Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

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Miscellaneous

Description of Components:

Wiring: Prewired pole, gauge (#10) TEW wires, exceeding the maintenance opening.

All wire connection will be supplied with quick disconnect plugs.

Hardware: All exposed screws shall be stainless steel with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone.

Finish: Color to be **dark forest green textured (GN8TX)**. Application of a polyester powder coat paint. (4 mils/100 microns). The chemical composition provides a highly durable UV and salt spray resistant finish in accordance to the ASTM-B117-73 standard and humidity proof in accordance to the ASTM-D2247-68 standard.

Substitutions: To enable all tenders to be judged equitably, they shall be based on the specified products in this document and shown on the drawings.

a) The proposal for any substitute products must be attached to their tender separately, identifying the substitute product by its trade name along with any savings it may represent.

b) Following the opening of the tender, only those substitutes proposed by the lowest bidder of the specified products, will be considered.

c) All substitute approval requests shall be accompanied by manufacturing drawings, complete with photometric data produced by an independent laboratory.

d) Each substitute sample must be presented to the owner/consultant within seven days following the opening of tenders. The sample must be completely operational. After this time, the bidder will be required to supply the original specified product.

e) The owner/consultant reserves the right to grant or deny approval for proposed substitutions without prejudice to his rights and his decision shall be final.

The above conditions apply to this section independently of any other clauses on the subject found in this document.

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Lamp Technical Information

Lamps #	Rated life hrs. [1]	LED Manufacturer	CRI	Color Temperature [2]	Initial Lumens	Wattage		Max System AC currant: 120v	LED mA
						Lamp	System [3]		
40W30LED4K	70,000	Philips Lumileds Rebel or Cree XP	70	4000K	3000	40W	45W	0.47A	400mA
40W49LED4K	70,000		70	4000K	3800	42W	47W	0.47A	285mA
60W30LED4K	70,000		70	4000K	4000	60W	68W	0.7A	600mA
65W49LED4K	70,000		70	4000K	5200	65W	72W	0.7A	428mA
90W49LED4K	70,000		70	4000K	6300	90W	102W	1A	571mA
105W79LED4K	70,000	Philips Lumileds Rebel or Cree XP	70	4000K	8200	105W	119W	1.17A	428mA
130W98LED4K	70,000		70	4000K	10400	130W	147W	1.4A	428mA
150W79LED4K	70,000		70	4000K	10300	150W	170W	1.7A	600mA
180W98LED4K	70,000		70	4000K	12600	180W	204W	2A	571mA

[1] Rated life represents the time it takes for the LED system to reach 70% of initial lumen output.

[2] On average.

[3] System wattage includes the lamp and the LED driver.

- **How to calculate the lamp lumen per watt ratio:** In the above table and according to your choice of lamp, please note the initial lamp lumen value and divide this value by the lamp wattage. (Example: 40W30LED4K : 3000/40=75)

- **How to calculate the system lumen per watt ratio (LER):** First, visit our website at www.lumec.com and download the IES file (photometric file) of your selected Philips Lumec product . Then, use a photometric software to get the absolute system lumens value and divide by the system wattage. (Example: 40W30LED4K : Absolute system lumens / 45W = LER)

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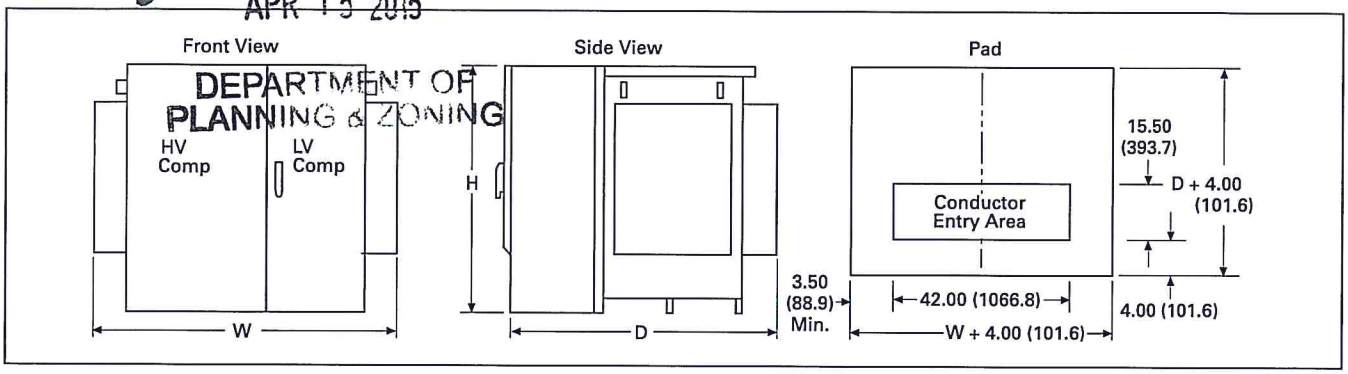

Figure 17.0-9. Pad-Mounted Transformer (75–2500 kVA)—Dimensions in Inches (mm)

Table 17.0-9. Standard Unit, Oil-Immersed 65°C Rise, 75–2500 kVA—Dimensions in Inches (mm)

kVA	Transformer Dimensions			Approximate Weight Lbs (kg)	Gallons (Liters) of Oil (Approximate)
	Width (W)	Depth (D)	Height (H)		
HV: 5–15 kV Radial Feed, Livefront					
75	56.00 (1422.4)	50.00 (1270.0)	56.00 (1422.4)	2280 (1034.2)	115 (435.3)
112	56.00 (1422.4)	50.00 (1270.0)	56.00 (1422.4)	2400 (1088.6)	115 (435.3)
150	56.00 (1422.4)	50.00 (1270.0)	56.00 (1422.4)	2700 (1224.7)	125 (473.2)
225	56.00 (1422.4)	54.00 (1371.6)	58.00 (1473.2)	3350 (1519.5)	150 (567.8)
300	60.00 (1524.0)	58.00 (1473.2)	58.00 (1473.2)	3650 (1655.6)	165 (624.6)
500	66.00 (1676.4)	62.00 (1574.8)	60.00 (1524.0)	5200 (2358.7)	200 (757.1)
750	81.00 (2057.4)	64.00 (1625.6)	68.00 (1727.2)	7200 (3265.9)	360 (1362.7)
1000	84.00 (2133.6)	66.00 (1676.4)	68.00 (1727.2)	9000 (4082.3)	400 (1514.2)
1500	86.00 (2184.4)	72.00 (1828.8)	68.00 (1727.2)	10,250 (4649.3)	440 (1665.6)
2000	92.00 (2336.8)	80.00 (2032.0)	72.00 (1828.8)	13,400 (6078.1)	550 (2082.0)
2500	98.00 (2489.2)	82.00 (2082.8)	72.00 (1828.8)	15,000 (6803.9)	570 (2157.7)
3000	102.00 (2590.8)	83.00 (2108.2)	77.00 (1955.8)	16,500 (7484.3)	625 (2365.9)
HV: 5–15 kV Radial Feed, Deadfront					
75	62.00 (1574.8)	50.00 (1270.0)	56.00 (1422.4)	2350 (1065.9)	115 (435.3)
112	62.00 (1574.8)	50.00 (1270.0)	56.00 (1422.4)	2450 (1111.3)	115 (435.3)
150	62.00 (1574.8)	50.00 (1270.0)	56.00 (1422.4)	2700 (1224.7)	125 (473.2)
225	62.00 (1574.8)	54.00 (1371.6)	58.00 (1473.2)	3400 (1542.2)	150 (567.8)
300	62.00 (1574.8)	58.00 (1473.2)	58.00 (1473.2)	3700 (1678.3)	165 (624.6)
500	66.00 (1676.4)	62.00 (1574.8)	60.00 (1524.0)	5400 (2449.4)	200 (757.1)
750	81.00 (2057.4)	64.00 (1625.6)	68.00 (1727.2)	7200 (3265.9)	360 (1362.7)
1000	84.00 (2133.6)	66.00 (1676.4)	68.00 (1727.2)	9000 (4082.3)	400 (1514.2)
1500	86.00 (2184.4)	72.00 (1828.8)	68.00 (1727.2)	10,250 (4649.3)	440 (1665.6)
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2500	98.00 (2489.2)	82.00 (2082.8)	72.00 (1828.8)	15,000 (6803.9)	570 (2157.7)
3000	102.00 (2590.8)	83.00 (2108.2)	77.00 (1955.8)	16,500 (7484.3)	625 (2365.9)
HV: 5–15 kV Loop Feed, Livefront					
75	65.00 (1651.0)	50.00 (1270.0)	56.00 (1422.4)	2400 (1088.6)	115 (435.3)
112	65.00 (1651.0)	50.00 (1270.0)	56.00 (1422.4)	2500 (1134.0)	115 (435.3)
150	65.00 (1651.0)	50.00 (1270.0)	56.00 (1422.4)	2800 (1270.1)	125 (473.2)
225	65.00 (1651.0)	54.00 (1371.6)	58.00 (1473.2)	3500 (1587.6)	150 (567.8)
300	66.00 (1676.4)	58.00 (1473.2)	58.00 (1473.2)	3800 (1723.7)	165 (624.6)
500	68.00 (1727.2)	62.00 (1574.8)	60.00 (1524.0)	5600 (2540.1)	200 (757.1)
750	82.00 (2082.8)	64.00 (1625.6)	68.00 (1727.2)	7200 (3265.9)	360 (1362.7)
1000	86.00 (2184.4)	66.00 (1676.4)	68.00 (1727.2)	9000 (4082.3)	400 (1514.2)
1500	88.00 (2235.2)	72.00 (1828.8)	68.00 (1727.2)	10,250 (4649.3)	440 (1665.6)
2000	92.00 (2336.8)	80.00 (2032.0)	72.00 (1828.8)	13,400 (6078.1)	550 (2082.0)
2500	98.00 (2489.2)	82.00 (2082.8)	72.00 (1828.8)	15,000 (6803.9)	570 (2157.7)
3000	102.00 (2590.8)	83.00 (2108.2)	77.00 (1955.8)	16,500 (7484.3)	625 (2365.9)

Dimensional Variations

Height Variations

1. Add 3.00 inches (76.2 mm) to the height when using bayonet fusing on all kVA ratings.
2. Add 7.00 inches (177.8 mm) to the height when using dry well canister fusing on 75–500 kVA ratings.
3. Add 8.00 inches (203.2 mm) to the height when using dry well canister fusing on 750 kVA rating only.

Depth Variations

4. Canister fuses require deeper tanks on some transformer sizes.
   a. Add 4.00 inches (101.6 mm) to the depth of kVA ratings 75, 150 and 225.
   b. Add 2.00 inches (50.8 mm) to the depth of kVA rating 500.
5. Less flammable natural esther fluid requires deeper tanks on some transformer ratings.
   a. Add 2.00 inches (50.8 mm) to the depth of kVA ratings 75–1500. Add 8.00 inches (203.2 mm) to the depth of kVA ratings 2000 and 2500.

Dimensions are approximate—not for construction.